

## CLAIMS

1. An ozonizer apparatus for sterilizing items, the apparatus comprising:  
a chamber containing a sealable non-conductive bag for receiving said  
items;  
a pump for selectively reducing air pressure within the chamber;  
5 a transformer for supplying a high voltage within said chamber;  
said bag having at least two compartments separated by a dielectric  
material, each such compartment having a conductor connected to said high voltage for  
generating ozone within said bag; and  
10 a timer for controlling operation of said pump and of said transformer for  
causing said ozone to circulate among said items within said bag for a selected period  
of time.
2. The apparatus recited in claim 1 wherein said conductor in each said  
compartment of said bag comprises a conductive screen.
3. The apparatus recited in claim 2 wherein each said conductive screen is  
contained within a pocket formed on an interior side wall of said bag.
4. The apparatus recited in claim 1 wherein said timer is configured for  
sequentially cycling said pump on and off for causing said bag to alternately inflate and  
deflate repeatedly.

5. The apparatus recited in claim 1 wherein said bag including said dielectric material is made of a high-temperature-resistant plastic.

6. A bag for receiving items to be sterilized using an enclosed chamber for containing the bag, a pump for selectively reducing pressure within the chamber, a transformer for supplying a high voltage within the chamber, and a timer for controlling operation of the pump and transformer; the bag comprising:

5 a non-conductive, high-temperature resistant material in a closed configuration having a re-sealable opening at an end of the bag, the bag having an interior segregated into a pair of compartments by a non-conductive interior barrier; said bag having opposed side walls, each such side wall having an interior surface to which a conductive grid is attached, each such grid being electrically  
10 connected through its respective bag side wall to a terminal of said transformer for generating ozone in said bag interior on respective sides of said barrier.

7. The bag recited in claim 6 wherein each said conductive grid is attached to a respective side wall interior surface by a pocket formed on said interior surface.

8. The bag recited in claim 6 wherein said barrier extends over an area greater than the area of each said conductive grid to prevent said grids from touching one another.

9. The bag recited in claim 6 wherein said re-sealable opening comprises a plastic zipper.

10. The bag recited in claim 6 wherein said barrier and said side walls are each made of an identical plastic material.